



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2010-0755; Directorate Identifier 2010-NE-12-AD; Amendment 39-18860; AD 2017-08-11]

RIN 2120-AA64

Airworthiness Directives; Rolls-Royce plc Turbofan Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are superseding airworthiness directive (AD) 2012-04-01 for all Rolls-Royce plc (RR) RB211-Trent 800 model turbofan engines. AD 2012-04-01 required removal from service of certain critical engine rotating parts based on reduced life limits. This AD makes additional revisions to the life limits of certain critical engine rotating parts. This AD was prompted by RR further revising the life limits of certain critical engine rotating parts. We are issuing this AD to correct the unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: See the For Further Information Contact section.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2010-0755; or in person at the Docket

Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the mandatory continuing airworthiness information, regulatory evaluation, any comments received, and other information. The address for the Docket Office (phone: 800-647-5527) is Document Management Facility, U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Robert Green, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 1200 District Avenue, Burlington, MA 01803; phone: 781-238-7754; fax: 781-238-7199; email: robert.green@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2012-04-01, Amendment 39-16956 (77 FR 10355, February 22, 2012), (“AD 2012-04-01”). AD 2012-04-01 applied to the specified products. The NPRM published in the Federal Register on January 18, 2017 (82 FR 5454). The NPRM proposed to continue to require removal from service of certain critical engine rotating parts based on reduced life limits.

Comments

We gave the public the opportunity to participate in developing this AD. We considered the comments received. The Boeing Company and American Airlines support the NPRM as written.

Conclusion

We reviewed the available data, including the comments received, and determined that air safety and the public interest require adopting this AD as proposed.

Costs of Compliance

We estimate that this AD affects 16 engines installed on airplanes of U.S. registry.

We estimate the following costs to comply with this AD:

Estimated Costs				
Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Replacement of critical engine rotating parts	0 work-hours x \$85 per hour = \$0	\$45,000 (pro-rated cost of parts)	\$45,000	\$720,000

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, Section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701, "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Is not a “significant rule” under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska to the extent that it justifies making a regulatory distinction, and
- (4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

- 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by removing airworthiness directive (AD) 2012-04-01, Amendment 39-16956 (77 FR 10355, February 22, 2012) and adding the following AD:

2017-08-11 **Rolls-Royce plc**: Amendment 39-18860; Docket No. FAA-2010-0755; Directorate Identifier 2010-NE-12-AD.

(a) Effective Date

This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

This AD replaces AD 2012-04-01, Amendment 39-16956 (77 FR 10355, February 22, 2012).

(c) Applicability

This AD applies to all Rolls-Royce plc (RR) RR RB211-Trent 875-17, 877-17, 884-17, 884B-17, 892-17, 892B-17, and 895-17 turbofan engines.

(d) Subject

Joint Aircraft System Component (JASC) Code 7200, Engine (Turbine/Turboprop).

(e) Unsafe Condition

This AD was prompted by RR revising the life limits of certain critical engine rotating parts. We are issuing this AD to prevent the failure of critical engine rotating parts, damage to the engine, and damage to the airplane.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(1) After the effective date of this AD, remove from service the parts listed in

Table 1 to paragraph (f) of this AD before exceeding the new life limit indicated:

Table 1 to Paragraph (f) – Reduced Part Lives

Part Nomenclature	Part Number	Life in Standard Duty Cycles	Life in Cycles using the HEAVY Profile
Intermediate Pressure (IP) Compressor Rotor Shaft	FK24100	12,500	11,500
IP Compressor Rotor Shaft	FK24496	8,860	8,180
High-Pressure Compressor (HPC) Stage 1 to 4 Rotor Discs Shaft	FK24009	4,560	4,460
HPC Stage 1 to 4 Rotor Discs Shaft	FK26167	5,580	5,280
HPC Stage 1 to 4 Rotor Discs Shaft	FK32580	5,580	5,280
HPC Stage 1 to 4 Rotor Discs Shaft	FW11590	8,550	6,850
HPC Stage 1 to 4 Rotor Discs Shaft	FW61622	8,550	6,850
HPC Stage 5 and 6 Discs and Cone	FK25230	5,000	5,000
HPC Stage 5 and 6 Discs and Cone	FK27899	5,000	5,000
IP Turbine Rotor Disc	FK21117	11,610	10,400
IP Turbine Rotor Disc	FK33083	0	0

(2) Reserved.

(g) Installation Prohibition

After the effective date of this AD, do not install any IP turbine discs, P/N FK33083, into any engine.

(h) Alternative Methods of Compliance (AMOCs)

The Manager, Engine Certification Office, FAA, may approve AMOCs for this AD. Use the procedures found in 14 CFR 39.19 to make your request. You may email your request to: ANE-AD-AMOC@faa.gov.

(i) Related Information

(1) For more information about this AD, contact Robert Green, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 1200 District Avenue, Burlington, MA 01803; phone: 781-238-7754; fax: 781-238-7199; email: robert.green@faa.gov.

(2) Refer to MCAI European Aviation Safety Agency, AD 2016-0223, dated November 8, 2016, for more information. You may examine the MCAI in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating it in Docket No. FAA-2010-0755.

(j) Material Incorporated by Reference

None.

Issued in Burlington, Massachusetts, on April 13, 2017.

Robert J. Ganley,
Acting Manager, Engine & Propeller Directorate,
Aircraft Certification Service.
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